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RPTC/TSG/RED-254-70
19 October 1970

MEMORANDUM FOR: Chief, Research & Engineering Division, TSG

25X1 SUBJECT : [redacted] Briefing of 7 October 1970

1. At 1400 hours on 7 October [redacted] personnel, [redacted] 25X1
25X1 [redacted] briefed RED personnel on Rear Projection and Front Projection Screen Technology, High Intensity Light Sources, and Color Control Cell concepts. Following are my observations and recommendations relating to this briefing.

2. Rear Projection Technology [redacted] introduced the subject with a short tutorial discussion on rear projection screen technology. This was certainly a wise judgment on his part due to the diversity of the interests represented by the group; however, it also revealed that his (and possibly [redacted] interests in this subject have not been as comprehensive as ours. In the areas they have studied their technical objectives appear to be essentially identical to our own. One basic factor that he did not discuss is the problem of ambient light reflection. At least two of the technologies they are experimenting with merit direct observation by qualified RED personnel. First, their scintillation removal technique utilizing orbital screen motion with the interstitial silicon material between the two scattering surfaces. The other is the polypropylene material which appears to have inherent physical properties that produce optical effects similar to the lenticular material that [redacted] is developing. As I said earlier, they said nothing of the ambient light absorption or reflection properties for this material, but the channelization and reradiation properties of the incident illumination appear to be similar to those of the lenticular screen and if its performance is competitive, it appears that screens made of the polypropylene material would be much more economical to produce. I recommended that we make these assessments as soon as possible.

3. Front Projection Screen Technology [redacted]. Most of this discussion centered around the [redacted] material. He referred frequently to an article from the SPMTE Journal of approximately 2 years ago. The feasibility of an asymmetric or off-axis projection system utilizing this material appears to exist. I recommend that RED further investigate the feasibility of this concept. In the course of this discussion an [redacted] patent for a stereo display system was alluded to. [redacted] obtained the reference information necessary for obtaining this patent.

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4. High Intensity Microscope Following Light Source [redacted] 25X1
25X1 [redacted] presented several drawings which indicated that he understood the problem and some of the current technology related to its solution. Unfortunately, he had approached the problem as if a total system design was called for rather than an adaptation to an existing light table (the
25X1 [redacted] 1540). He was informed of this discrepancy and arrangements have now
25X1 been made with [redacted] to provide [redacted] with our development objectives 25X1
for this system and the specifications of the [redacted] 1540 Light Table. 25X1

5. Color Control Cell. I did not attend this portion of the brief-
25X1 ing; however, [redacted] advised me that this group of [redacted] personnel 25X1
was not particularly familiar with the [redacted] personnel who are knowledgeable 25X1
25X1 of color technology. [redacted] was responsive to this situation and
has made subsequent arrangements to meet with the [redacted] color-wise personnel 25X1
25X1 and make them available to [redacted] for appropriate discussions. At this time these arrangements are proceeding satisfactorily.

[redacted] 25X1

Special Assistant for Plans & Applications, RED

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